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SensMixed R package: Easy-to-use application with graphical user interface for analyzing sensory and consumer data within a mixed effects model framework

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The **SensMixed** package offers analysis of sensory and consumer data within a mixed effects model framework. The package provides tools for analysis of simple settings, similar to what PanelCheck(www.panelcheck.com) is giving, as well as advanced tools such as incorporating MAM (mixed assessor model) Brockhoff, Schlich & Skovgaard (2014), handling unbalanced data and allowing for multi-way product structures. The automated identification of important random effects, that uses the methodology introduced in Kuznetsova, Christensen, Bavay and Brockhoff (2015) is also employed in the **SensMixed** package.

Based on the **shiny** R package, the **SensMixed** package includes an application that has a graphical user interface (GUI) for the provided tools. Apart from providing the GUI for the tools, the application includes such functionalities as importing the data in different formats, presenting results in tables and plots as well as saving them. A number of modelling options are provided that allow to easily construct and analyze in a proper manner a broad range of complex mixed effects models.

All that makes the package together with the application very valuable for sensory practitioners as requires no skills in R-programming and provides advanced statistical methods for analyzing sensory data. The usefulness of the package and the application will be illustrated on examples coming from the sensory studies.

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